

BEST AVAILABLE COPY**Remarks**

Claims 1-45 are pending in the application. All claims stand rejected. By this paper, claims 13-15, 22, 34-36, 42, and 43 have been amended. Claims 44 and 45 have been canceled, the limitations thereof being incorporated into claims 42 and 43, respectively. Reconsideration of all pending claims herein is respectfully requested.

Claims 1-45 were rejected under 35 U.S.C. 103(e) as being unpatentable over Easty et al. ("Easty") in view of Ohkura et al. ("Ohkura"). This rejection is respectfully traversed.

The Office's Assertion that Easty's Menu is *Polygonal* is Based on a Logical Fallacy

The Office's argument for Easty's menu being "polygonal" is apparently as follows:

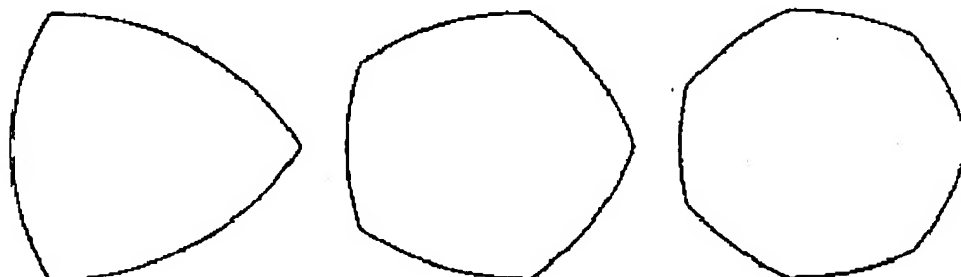
1. Some polygons are curvilinear (Reuleaux polygons);
2. Easty's menu is curvilinear (a circle);
3. Therefore, Easty's menu is polygonal.

This is a classical logical fallacy, which can readily be observed by replacing polygon with "dog," curvilinear with "bite," and Easty's menu with "my pet" as follows:

1. Some dogs bite;
2. My pet bites;
3. Therefore, my pet is a dog.

Even assuming the premises are correct, the reasoning expressed in the Office Action is flawed. The fact that some esoteric polygons may have curvilinear sides (Reuleaux polygons), does not make a circle (Easty), which has no "sides," into

a polygon. For example, the website referred to by the Examiner includes the following examples of Reuleaux polygons:

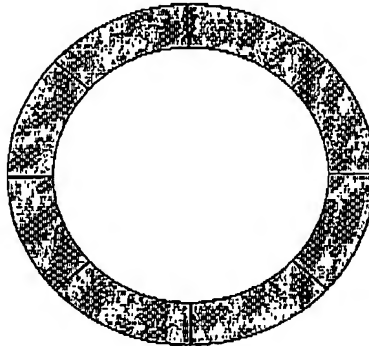


However, despite the curved sides, one of ordinary skill in the art could still discern, for example, a triangle, a pentagon, and a heptagon, in the above figures. A circle, however, does not have any "sides." Indeed, the Examiner's attention is directed to the following discussion by a mathematics professor explaining how a circle can never be considered a polygon. <http://mathforum.org/library/drmath/view/55097.html>.

The Office appears to be arguing that, because the applicant's figures use rounded rather than sharp points in the polygonal menus, the definition of "polygon" should be relaxed to the point where it can encompass Easty's circular menus. However, the rounded edges in applicant's Figs. 7-9 were merely included for aesthetic purposes. The specification clearly states that the "first and second menus may employ the same or different types of polygons, e.g., squares, pentagons, octagons, and the like." Specification at page 4. The applicant clearly distinguished the polygonal embodiment of Figs. 7-9 from the circular embodiment shown in Figs. 4-6. Easty describes no menu shaped like a square, pentagon, octagon, or the like.

The Office also seems to be arguing that a single element within Easty's menu represents a polygon, or if not a polygon, then a side of a polygon, rather than merely

a subdivision of a ring. For example, Easty's rings are subdivided into a plurality of wedges as follows:



The Office appears to be arguing that, due to the possibility of curved lines in certain polygons (*i.e.*, Reuleaux polygons), that an individual wedge or menu item constitutes a side, and that, collectively, the above figure comprises a polygon.



The above-illustrated wedge shape, however, is not a Reuleaux polygon. According to the standard definition, "a Reuleaux polygon is a polygon that is a curve of constant width - that is, a curve in which all diameters are the same length." See http://en.wikipedia.org/wiki/Equilateral_curve. Clearly, all diameters of the above figure are not the same length. Accordingly, the figure is not a Reuleaux polygon. Indeed, the applicant submits that it is not any type of polygon, and respectfully requests that the Examiner point to a reference that describes the figure as a polygon.

Even if it is deemed a polygon, the above figure does not represent a menu, as claimed, but an individual menu item. No matter how the Examiner slices Easty's menu, it is a ring (circle), which, by definition, cannot be a polygon. Unlike the

claimed invention, the individual wedge illustrated above does not include "a first set of selectable options_s circumferentially disposed on the first polygonal menu." It contains an individual item, not a menu of items. When combined, the wedges form a circle, not a polygon.

Although an Examiner is allowed to give a term its broadest "reasonable" interpretation, the interpretation of a polygon being a curvilinear figure that reads upon a circular menu without sides distorts the meaning of the term far beyond the reasonable. One of ordinary skill in the art would not refer to a ring shape as a polygon. That the Examiner can locate an obscure branch of geometry with a Google search does not change what one of ordinary skill in the art would refer to basic terms, such as polygon and circle.

The Office Action states that "the words curvilinear and polygon can be substituted for one another." The applicant strongly disagrees. The term "curvilinear" is universally defined as "consisting of or bounded by curved lines." Random House Webster's College Dictionary. **The word "curvilinear" does not describe a shape.** A line could be curvilinear. However, a line is not a polygon. Thus, the words "curvilinear" and "polygon" cannot be synonymous.

Whether the terms "curvilinear" and "polygon" are synonymous is irrelevant, however, because Easty does not use either term. The applicant respectfully suggests that the Examiner is apparently borrowing the "curvilinear" language from another embodiment of the invention (Figs. 4-6), which mentions curvilinear menus. However, the present application clearly distinguishes between ring-shaped menus

having no sides, as in Easty, and polygonal menus having 3, 5, and 8 sides (Figs. 7-9).

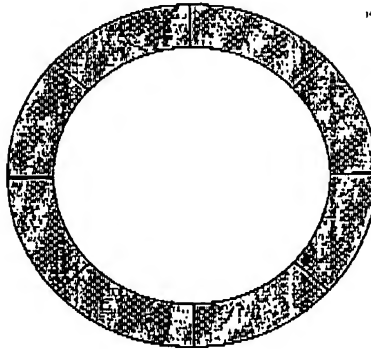
Easty Does Not Disclose a Polygonal Menu With a Variable Number of Sides Based on the Number of Options

Claim 3 recites that "each side of the first polygonal menu is associated with a particular selectable option" and that "the number of selectable options in the first set determines the number of sides for the first polygonal menu. For instance, as shown in FIG. 9 of the present application, a triangular menu may be used for three options, a pentagonal menu for five options, and an octagonal menu for eight options. As argued above, a circle is not a polygon—it has no sides. Easty does create more of the ring wedges to accommodate additional menu items, as shown below.



However, the ring wedges are not even Reuleaux polygons, let alone more traditional polygons known to those of skill in the art, with straight sides.

In any case, the above figure is not a "side" of a polygonal menu, even if the menu as a whole is a polygon. However, a ring shape, as shown below, would never be referred to as a polygon by one of ordinary skill in the art.



A circle is not a polygon, not in any type of geometry, Reuleaux or otherwise.

In any case, Easty does not disclose or suggest varying the number of sides of a polygonal menu based on the number of options.

Cited References Do Not Show Polygonal Menu with Sides Comprising Straight Line Segments

Claim 22 has been amended to recite "a first polygonal menu comprising a plurality of sides, at least a portion of each side including a **straight line segment**, each straight line segment defining a side of a **straight-sided polygon** if an end of each straight line segment is joined with a nearest end of an adjacent straight line segment."

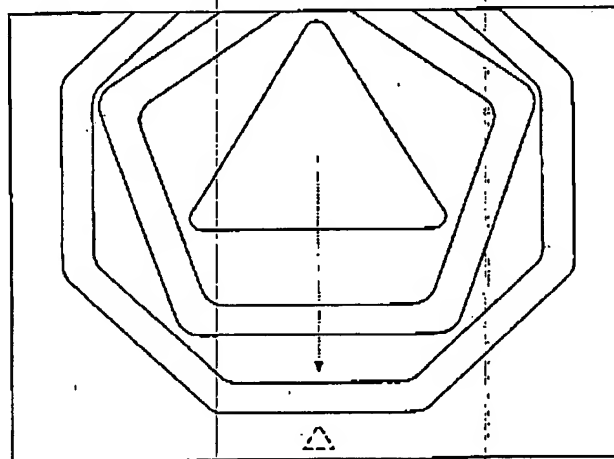
Easy does not disclose straight line segments in the "sides" of his ring-shaped structure that, when joined end-to-end, form a straight-sided polygon. Easy's menu is circular. The only straight lines are the radial lines defining his menu wedges. These lines, however, do not in any way form a straight-sided polygon. Furthermore, Easy's menu wedges, themselves, are not Reuleaux polygons, as discussed above.

Easy Does Not Satisfy Anticipation Standard

To establish "anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly." MPEP 706.02(a). In this case, Easy fails, at least, to teach or suggest *polygonal* menus, and polygonal menus with *straight line segments*. Accordingly, the 35 U.S.C. 102 rejection should be withdrawn.

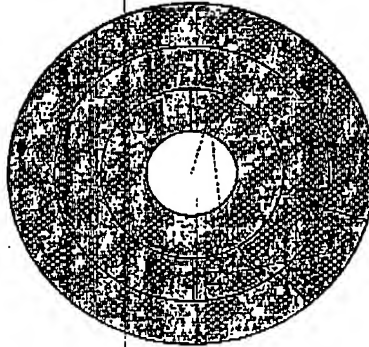
Cited References Do Not Disclose a Radially-Aligned Selection Path

Claims 42 and 43 have been amended to include limitations similar to those of canceled claims 44 and 45, *i.e.*, "the user-selected options from the first and second [and third] sets always define a **radially-aligned** selection path through the first and second [and third] polygonal menus." An example of a radially-aligned selection path through a plurality of polygonal menus is as follows:



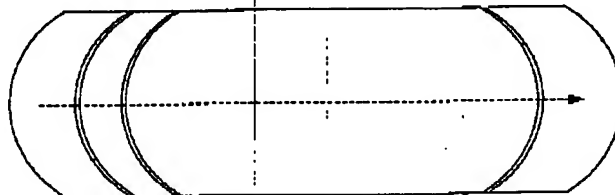
The selected options are "radially-aligned" because they are aligned along a radius (dashed line) defined by the concentric menus, which extends from the center of the menus towards the fixed selection indicator (dashed triangle).

Easty does not disclose or suggest a radially-aligned selection path. In Easty, the selection indicator for each successive menu is not fixed, as required by claim 1. Instead, the user moves the selection indicator around each ring to select a desired option. This results in a selection path that is not always radially-aligned. Indeed, his selection path cannot always be radially aligned, or a majority of the options will not be selectable, destroying the intent of Easty. For example, a selection path in Easty may look like the following:



No one of ordinary skill in the art would refer to Easty's selection path as "radially-aligned."

Contrary to the Examiner's assertions, however, Ohkura does not cure the deficiencies of Easty. Ohkura's menu consists of a plurality of cylinders stacked into a longer cylindrical interface, as shown below.

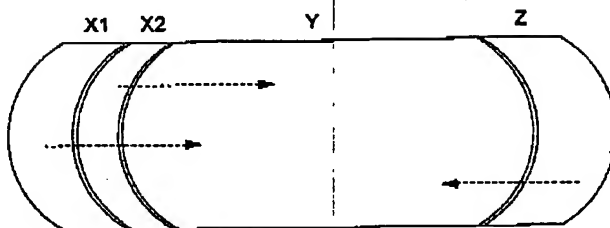


If the Examiner is suggesting that the successive rotation of rings from left to right (or right to left) constitutes a "selection path," as shown by the dashed line above, that path is not "radial" by any reasonable interpretation of the term. At best, the dashed line shown above may be referred to as "normal" or "perpendicular" to the circular planes defined by the cylinders. The line cannot properly be referred to as a "radius" of anything.

Because both of the references are missing a claimed element, *i.e.*, "a radially-aligned selection path," the combination of the references is also missing this element. Furthermore, any modification of the references should be made in view of Easty's teaching away from a radially-aligned selection path, as shown in his FIG. 1c.

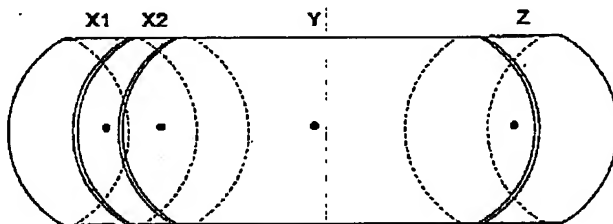
Ohkura even fails to show a linear selection path (e.g., from left to right or right to left) through the menus. Ohkura's cylindrical interface, as shown in his FIG. 18, has four independently rotatable disks. However, each successive disk does not represent a sub-menu of a previous disk, analogous to the concentric polygons of the claimed invention.

For example, as shown below, "Area Z" represents different genres of television programs. Rotating "Area Z" will change the programs shown in "Area Y" (to the left of "Area Z") according to the selected genre. However, rotating "Area X1" will not change "Area X2" (directly to the right of "Area X1"), but, instead, will also change "Area Y."



Thus, Ohkura's "selection path," unlike the claimed invention, does not show a progressive series of menus along a linear, let alone radial, direction.

Finally, Ohkura does not even teach concentric menus. According to the Office Action at page 3, "Ohkura expressly teaches one or more polygonal menus that are *concentric* menus...." (emphasis added). However, to be concentric, the menus must "share a common center." See *The American Heritage® Dictionary of the English Language, Fourth Edition*. However, Ohkura's three-dimensional menus do not share a common center, as shown below, with each dot representing the center of a respective menu.



No one of ordinary skill in the art would refer to these stacked disks as "concentric." Although the Examiner argues that all of the different centers are on the same axis, the applicant respectfully submits that Ohkura does not disclose or suggest viewing the menus along that axis. However, if the cylinder was viewed from the end, none of the menus would be visible because (1) the writing is on the circumference of the cylinder and (2) all of the individual cylinders are the same size.

If the Examiner is proposing some radical alteration of Ohkura in which menu items would be visible when the cylinder is viewed end-on, the applicant respectfully submits that this is hindsight reconstruction based on the applicant's own teachings.

Easty Teaches Away from Rotation of the Inner Menu

With respect to the proposed combination, the Office Action does not take into account the fact that Easty actually teaches away from rotation of the inner menu.

Easty clearly states that

[w]hen an icon 11a is selected from the outer menu ring 11, in addition to rotating the outer ring to the new setting, the inner ring 12 is re-displayed with appropriate icons identifying the available subcategories associated with the selected category. For example, if the "music" category is selected from the outer menu ring 11, the icons displayed on the inner menu ring 12 will include rock, classical, etc. (FIG. 1b). When the inner menu ring 12 is initially displayed in response to a selection of a content category, an arbitrary one among the icons 12a is highlighted, such as the one located at the top of the inner ring, or a randomly selected one. Highlighting is done by means of a highlighting icon 14, which is a border having a distinctive shape surrounding the highlighted icon (FIG. 1b). The user may then select an icon 12a from the second menu ring 12 representing a subcategory of digital contents. When a second icon 12a is selected, the inner menu ring 12 is re-displayed with the selected second icon highlighted, while the positions of the second icons along the second circle remain unchanged (FIG. 1c).

Column 5, lines 45-64 (emphasis added).

In light of this teaching, Easty and Ohkura should not be combined, at least in the way that that the Examiner suggests. In determining obviousness, "the inquiry is not whether each element existed in the prior art, but whether the prior art made obvious the invention as a whole for which patentability is claimed." Hartness International, Inc. v. Simplicatic Engineering Co., 819 F.2d 1100, 2 U.S.P.Q.2d 1826 (Fed. Cir. 1987) (emphasis added). Part of this inquiry into the invention "as a

whole" must take into account examples of "teaching away" from the claimed invention in the cited references. After reading Easty, one of ordinary skill in the art would be left with the impression of the desirability of not rotating the successive rings, but using, instead, a movable selection indicator. This teaching, combined with Ohkura's teaching of rotatable cylinders, does not result in the claimed invention. If anything, Ohkura should be modified to have a movable selection indicator, as in Easty, rather than the other way around.

Cited References Do Not Disclose Automatically Playing an Audio Sample in Response to an Option Being Aligned With Fixed Selection Indicator Without an Explicit Selection Action

As amended, claims 13 and 34 recite that the audio sample is **automatically** played in response to the corresponding option **being aligned** with a selection indicator **without an explicit selection action other than rotating one of the polygonal menus**. As the user rotates the menu, audio samples associated with each option are automatically played without the user having to actually select one of the options. Easty allows a user to selectively play an audio program by rotating the menu ring and then making an explicit selection. There is no teaching or suggestion that an audio or video program is automatically played each time the ring is rotated.

Cited References Do Not Disclose a Second Polygonal Menu That Concentrically Encloses The First Polygonal Menu

As amended, claims 14 and 15 recite that the second polygonal menu is displayed in response to a selection from the first polygonal menu. Additionally, claim 14 recites that the second polygonal menu **concentrically encloses** the first polygonal menu, while claim 15 recites that the second polygonal menu is **concentrically enclosed by** the first polygonal menu. With regard to the prior versions of both claims, the Examiner states that "Easty teaches the inner and outer concentric rings are displayed around one another." **This statement describes a geometric impossibility.** An "inner" ring cannot be displayed around an "outer" ring.

Easty appears to have progressively smaller menus, as shown in FIGs. 1a-c. In Ohkura, all of the menus are the same size. The applicant respectfully requests that the Examiner point out a figure in the references in which subsequent sub-menus become progressively larger.

Cited References Do Not Account for Each and Every Limitation

A rejection based on prior art – whether grounded in anticipation or obviousness – must account for each and every claim limitation. *Celeritas Techs. Inc. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1360, 47 U.S.P.Q.2d 1516, 1522 (Fed. Cir. 1998) (anticipation); *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q.2d 494, 496 (CCPA 1970) (obviousness); MPEP § 2143.03 ("To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or

suggested by the prior art.") (emphasis added). However, at least the following limitations are not accounted for in the cited references:

- (1) rotating a *second* or subsequent *concentric* menu to align with a fixed selection indicator;
- (2) always defining a *radially-aligned* selection path through the menus;
- (3) *automatically* playing an audio sample in response to an option being merely *aligned*, without an explicit selection action other than rotating the menu; and
- (4) concentrically displaying the second displayed menu *around* the first menu in response to a selection from the first menu, resulting in progressively larger menus.

Accordingly, the applicant respectfully submits that a prima facie case of obviousness cannot be established with the cited references and respectfully requests that the 35 U.S.C. 103(a) rejection be withdrawn.

Conclusion

In view of the foregoing, independent claims 1, 22, 40, 41, and 42 are believed to be patentably distinct over the prior art of record. In addition, at least dependent claims 2, 13-15, 23, 34-36, and 43 are believed to be patentably distinct for the reasons stated above. All other claims depend directly or indirectly from one of the foregoing claims and are likewise believed to be patentably distinct based on that dependency.

Accordingly, the applicant respectfully submits that all claims are in condition for allowance. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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